

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A compression journal comprising:
  - at least two circularly shaped segments;
  - a cylindrical shaft having said circularly shaped segments positioned around said shaft; and
  - means, positioned around the outside of said segments, for maintaining electrical contact between said segments and said cylindrical shaft.
2. The compression journal as recited in Claim 1 wherein said segments comprise a silver impregnated graphite material.
3. The compression journal as recited in Claim 1 wherein said cylindrical shaft comprises a coin silver sleeve around an outer portion of said shaft for contacting said circularly shaped segments.
4. The compression journal as recited in Claim 1 wherein said journal comprises a shield for securing said journal within a stator assembly and blocking RF signal leakage.

5. The compression journal as recited in Claim 1 wherein said means for maintaining electrical contact between said segments and said cylindrical shaft comprises a rubber O-ring.

5 6. The compression journal as recited in Claim 1 wherein said means for maintaining electrical contact between said segments and said cylindrical shaft comprises a conductive O-ring.

7. The compression journal as recited in Claim 1 wherein said compression journal is positioned within a rotary joint.

8. A rotary joint comprising:  
a rotor assembly having a housing and a shaft extending outward from a center portion thereof;  
a stator assembly having a cylindrical opening for receiving said shaft of said rotor assembly, the housing of said rotor assembly being secured within a housing of said stator assembly;  
a cavity in said stator assembly for receiving at least two circularly shaped segments positioned around said shaft of said rotor assembly; and

means positioned around the outside of said segments for maintaining electrical contact between said segments and said shaft of said rotor assembly.

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9. The rotary joint as recited in Claim 8 wherein said rotary joint comprises a shield, having an opening for said shaft to pass therethrough, positioned against an end of said circularly shaped segments for securing said segments within said cavity of said stator.

10. The rotary joint as recited in Claim 9 wherein said shield provides a ground connection between said circularly shaped segments and said stator housing.

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11. The rotary joint as recited in Claim 8 wherein said segments comprise a silver impregnated graphite material.

12. The rotary joint as recited in Claim 8 wherein said cylindrical shaft comprises a coin silver outer sleeve for contacting said segments.

13. The rotary joint as recited in Claim 8 wherein said means for maintaining electrical contact between said segments and said shaft comprises a rubber O-ring.

14. The rotary joint as recited in Claim 8 wherein said means for maintaining electrical contact between said segments and said shaft comprises a conductive O-ring.

5       15. The rotary joint as recited in Claim 8 wherein said cavity of said stator assembly comprises a channel having a predetermined width within said cavity for receiving said means for maintaining electrical contact between said segments and said shaft.

10       16. The rotary joint as recited in Claim 8 wherein said housing of said rotor assembly comprises a bearing ring positioned around an outer end portion of said housing to facilitate rotation of said rotor assembly when positioned within said stator assembly.

15       17. The rotary joint as recited in Claim 8 wherein said rotor assembly comprises a first capacitive feed ring through which said shaft extends and said stator assembly comprises a second capacitive feed ring through which said shaft passes, said first capacitive feed ring being disposed in close relationship to said second capacitive feed ring when said rotor assembly is positioned within said stator assembly.

18. A method of providing a compression journal comprising the steps of:

providing at least two circularly shaped segments;  
positioning said circularly shaped segments around a  
cylindrical shaft; and

providing means around the outside of said circularly shaped segments for maintaining electrical contact between said segments and said cylindrical shaft.

19. The method as recited in Claim 18 wherein said step of providing at least two circularly shaped segments comprises the step of providing silver impregnated graphite segments.

20. The method as recited in Claim 18 wherein said step of positioning said circularly shaped segments around a cylindrical shaft comprises the step of providing a coin silver sleeve around an outer portion of said shaft for contact with said circular shaped segments.

21. The method as recited in Claim 18 wherein said step of providing means for maintaining electrical contact between said segments and said cylindrical shaft comprises the step of providing a rubber O-ring.

22. The method as recited in Claim 18 wherein said step of providing means for maintaining electrical contact between said segments and said cylindrical shaft comprises the step of providing a conductive O-ring.

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23. The method as recited in Claim 18 wherein said method comprises the step of attaching a metal shield over an end of said circularly shaped segments for blocking RF signal leakage.

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